

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017738**Date Inspected:** 29-Oct-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Qiu Wen**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** TOWER & OBG Components**Summary of Items Observed:**

On this date Caltrans Office of Structural Materials Quality Assurance Inspector, Sandeep Kumar (QA) was present during the times noted above for observations relative to the work being performed.

TOWER JETTY

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint # 07 located on West tower Lift-4 Skin 'E', 119 M Backfill plate WSD1 – FESA4 – 4B/F. Welder is identified as 044541. ZPMC Quality Control (QC) Inspector is identified Zhu Feng. The welding variables recorded by QC appeared to comply with the WPS – B – P – 3212 – B – U2a – 2.

(See attached photo)

BAY#10

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint # 36 located on Tower façade channel built-up assembly, ND1 – SFSA4 – 322A/B. Welder is identified as 050038. ZPMC Quality Control (QC) Inspector is identified as Wang Hao. The welding variables

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recorded by QC appeared to comply with the WPS – B – P – 2114.

Weld joint # 02 located on Tower façade channel built-up assembly, ND1 – SFSA4 – 322A/B. Welder is identified as 057220. ZPMC Quality Control (QC) Inspector is identified as Wang Hao. The welding variables recorded by QC appeared to comply with the WPS – B – P – 2114.

ORTHOTROPIC BOX GIRDER (OBG) AT BAY#10

This QA Inspector observed the following work in progress

Fluxcored Arc Welding (FCAW):

Weld joint # 01 located on U-rib splice plate GGL – MQ – 1958 – 18. Welder is identified as 040458. ZPMC Quality Control (QC) Inspector is identified as Sun Tian Liang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2231 – Tc – U4b – F.

Weld joint # 02 located on U-rib splice plate GGL – MQ – 1958 – 08. Welder is identified as 040533. ZPMC Quality Control (QC) Inspector is identified as Sun Tian Liang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2231 – Tc – U4b – F.

Weld joint # 02 located on U-rib splice plate GGL – MQ – 1958 – 18. Welder is identified as 040458. ZPMC Quality Control (QC) Inspector is identified as Sun Tian Liang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2231 – Tc – U4b – F.

Weld joint # 01 located on U-rib splice plate GGL – MQ – 1958 – 08. Welder is identified as 040533. ZPMC Quality Control (QC) Inspector is identified as Sun Tian Liang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2231 – Tc – U4b – F.

ORTHOTROPIC BOX GIRDER (OBG) AT BAY#10

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint # 044 located on Bike Path, BK004A1 – 029. Welder is identified as 500363. ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – B – P – 2214 – B – U2.

Weld joint # 183 located on Bike Path BK004A7 – 030. Welder is identified as 053829. ZPMC Quality Control (QC) Inspector is identified as Xu Jie. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2113.

Weld joint # 044 located on Bike Path, BK004A1 – 029. Welder is identified as 056200. ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – B – P – 2214 – B – U2. (See attached photo)

BAY#11

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted Notification No.

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007151

Visual Inspection Testing (VT)

This QA inspector performed VT of the area previously tested and accepted by ZPMC Quality Control personnel. The member is identified as TOWER Component. The identified component and location designations reviewed are as follows:

WEST TOWER LIFT-3, REPAIR AREAS AFTER BLASTING AND PAINTING (EXTERNAL)

SKIN 'A' 99 M ELEVATION - CLUSTER OF POROSITY

SKIN 'A' 99 M ELEVATION - CLUSTER OF POROSITY

SKIN 'E' 89 M ELEVATION – ARC GOUGE

SKIN 'D' 114 M ELEVATION – ARC GOUGE

SKIN 'A' 99 M ELEVATION - CLUSTER OF POROSITY

SKIN 'A' 99 M ELEVATION - CLUSTER OF POROSITY

SKIN 'A' 89 M ELEVATION - POROSITY

WEST TOWER LIFT-3, REPAIR AREAS AFTER BLASTING AND PAINTING (INTERNAL)

SKIN 'A' 102.5 M DIAPHRAGM – ARC GOUGE

SKIN 'B' 105.5 M FIT-LUG WELD - POROSITY

SKIN 'B' 105.5 M FIT-LUG WELD - UNDERFILL

SKIN 'D' 105.5 M FIT-LUG WELD – POROSITY

SKIN 'D' 105.5 M FIT-LUG WELD – POROSITY

SKIN 'D' 105.5 M FIT-LUG WELD – POROSITY

SKIN 'A' 102.5 M DIAPHRAGM – SKIN 'A'

SKIN 'D' 109 M DIAPHRAGM TO SKIN WELD - POROSITY

SKIN 'E' 109 M FIT-LUG WELD – POROSITY

SKIN 'C' 111.69 M– NOTCH

SKIN 'B' 111.69 M ELEVATION – ARC GOUGE

SKIN 'E' 111.69 M ELEVATION – ARC GOUGE

SKIN 'A' 99 M ELEVATION – POROSITY

SKIN 'E' 99 M ELEVATION – POROSITY

SKIN 'D' 89 M ELEVATION– POROSITY

SKIN 'A' 89 M ELEVATION– POROSITY

SKIN 'C' 95.5 M ELEVATION– UNDERFILL

95.5M ELEVATION, D/E CORNER– POROSITY

Magnetic Particle Testing (MT)

This QA inspector performed MT of the area previously tested and accepted by ZPMC Quality Control personnel.

This QA Inspector generated an MT report for this date. The member is identified as TOWER Component. The component and location designations reviewed as follows:

WEST TOWER LIFT-3, REPAIR AREAS AFTER BLASTING AND PAINTING (EXTERNAL)

SKIN 'A' 99 M ELEVATION - CLUSTER OF POROSITY

SKIN 'A' 99 M ELEVATION - CLUSTER OF POROSITY

SKIN 'E' 89 M ELEVATION – ARC GOUGE

SKIN 'D' 114 M ELEVATION – ARC GOUGE

SKIN 'A' 99 M ELEVATION - CLUSTER OF POROSITY

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SKIN 'A' 99 M ELEVATION - CLUSTER OF POROSITY

SKIN 'A' 89 M ELEVATION - POROSITY

WEST TOWER LIFT-3, REPAIR AREAS AFTER BLASTING AND PAINTING (INTERNAL)

SKIN 'A' 102.5 M DIAPHRAGM – ARC GOUGE

SKIN 'B' 105.5 M FIT-LUG WELD - POROSITY

SKIN 'B' 105.5 M FIT-LUG WELD - UNDERFILL

SKIN 'D' 105.5 M FIT-LUG WELD – POROSITY

SKIN 'D' 105.5 M FIT-LUG WELD – POROSITY

SKIN 'D' 105.5 M FIT-LUG WELD – POROSITY

SKIN 'A' 102.5 M DIAPHRAGM – SKIN 'A'

SKIN 'D' 109 M DIAPHRAGM TO SKIN WELD - POROSITY

SKIN 'E' 109 M FIT-LUG WELD – POROSITY

SKIN 'C' 111.69 M– NOTCH

SKIN 'B' 111.69 M ELEVATION – ARC GOUGE

SKIN 'E' 111.69 M ELEVATION – ARC GOUGE

SKIN 'A' 99 M ELEVATION – POROSITY

SKIN 'E' 99 M ELEVATION – POROSITY

SKIN 'D' 89 M ELEVATION– POROSITY

SKIN 'A' 89 M ELEVATION– POROSITY

SKIN 'C' 95.5 M ELEVATION– UNDERFILL

95.5M ELEVATION, D/E CORNER– POROSITY

ORTHOTROPIC BOX GIRDER (OBG) AT BAY#11

This QA Inspector observed the following work in progress

Fluxcored Arc Welding (FCAW):

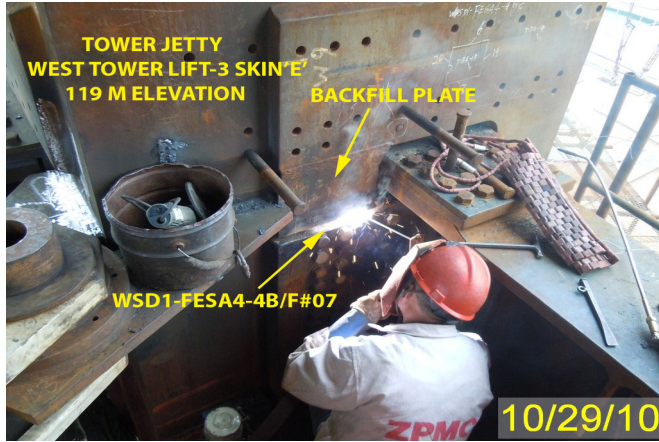
Weld joint # 16 located on Bike Path BK004C – 024. Welder is identified as 040758. ZPMC Quality Control (QC) Inspector is identified as Xu Jie. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

Weld joint # 22 located on Bike Path BK004C – 024. Welder is identified as 042218. ZPMC Quality Control (QC) Inspector is identified as Xu Jie. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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Summary of Conversations:

No Relevant Conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Thomas Ho- 15002048250, who represents the Office of Structural Materials for your project.

Inspected By: Kumar,Sandeep

Quality Assurance Inspector

Reviewed By: Clifford,William

QA Reviewer